

Biographies

THOMAS ADDISON (1795–1860)

Addison's disease of the adenal glands, Addisonian (pernicious) anaemia

Thomas Addison was born in 1795 in a village eight miles from Carlisle, where his father was a grocer. In 1812 he became a medical student in Edinburgh. He graduated in 1815 with a thesis (in Latin), entitled 'On syphilis and mercury'. He moved to London, worked as physician at the General Dispensary, obtained his LRCP and, in 1824, was appointed assistant physician at Guy's Hospital. His contemporary and colleague was Richard Bright (of Bright's disease of the kidney).

In 1827, Addison was appointed lecturer in materia medica and in 1837 became full physician as well as lecturer in medicine, jointly with Richard Bright. In 1839 they co-authored *Elements of Practical Medicine*, in which we find the first clinical and autopsy account of acute appendicitis.

In 1855 Addison published a slim volume, of only 39 pages, entitled *On the Constitutional and Local Effects of Disease of the Suprarenal Capsules*, which can be regarded as the beginning of the study of the endocrine system. He describes a small series of four undoubted and six less certain examples of suprarenal disease (in those days commonly tuberculous), with their postmortem findings. In the same monograph, he describes cases of idiopathic anaemia, now recognized as pernicious (or Addisonian) anaemia.

Addison was a shy, taciturn man, with but a small private practice and, in his day, almost unknown outside his hospital and medical school. However, within Guy's he was a popular and forceful teacher, devoted to his students and patients; he was best as a bed-side

instructor. Towards the end, he suffered from fits of depression, retired from the staff in 1860, jumped from the window of his home and died of a fractured skull.

Addison's own specimens of diseased suprarenal glands, together with a painting and a model to show the typical Addisonian pigmentation, can be seen today in the Gordon Museum at Guy's Hospital.

NORMAN BARRETT (1903–1979)

Barrett's ulcer of the oesophagus

Norman Barrett was born in Adelaide, Australia. He was sent to school at Eton, and from there proceeded to Trinity College Cambridge, where he gained First Class Honours in the basic medical sciences in 1925. He trained at St Thomas's Hospital, London, and qualified in 1928. At St Thomas's he held resident hospital appointments and then the coveted post of resident assistant surgeon. A Rockefeller Fellowship enabled him to study under the Mayo brothers at the Mayo Clinic.

In 1935 he was appointed onto the surgical consultant staff back at St Thomas's Hospital. There, he developed a special interest in thoracic surgery, which in those days had especial emphasis on the surgical treatment of pulmonary tuberculosis. At the weekends, he would travel to sanatoria in South Wales and Cornwall to operate on thoracic cases there. In South Wales, with its large sheep population, he also became an acknowledged expert on hydatid disease of the lung. Barrett was a popular surgical teacher and prolific writer; he edited the new journal *Thorax*. He served the Royal College of Surgeons of England both as examiner and member of Council and was appointed CBE (Commander of the British Empire) in 1969 for his services to surgery. He died in 1979 at the age of 76; sadly, his last few years were dogged by poor health.

Barrett described the then unusual occurrence of a columnar epithelial lining of the distal oesophagus, with its propensity to ulceration and malignant change to adenocarcinoma. He regarded this as being

due to a congenitally short oesophageal squamous mucosa pulling up the columnar lining at the cardia. In recent years, these changes have become much more common and are now regarded as being due to intestinal metaplasia of the distal epithelial lining of the oesophagus as the result of reflux oesophagitis.

HERMAN BOERHAAVE (1668–1738)

Boerhaave's syndrome: ruptured oesophagus

Herman Boerhaave studied philosophy in Leiden before studying medicine. He practised medicine in Leiden, and was also Professor of Botany and Medicine, contributing the botanical garden in Leiden. He also revived the Hippocratic method of bedside teaching of clinical medicine, and advocated autopsy to enable correlation of pathology with clinical symptoms

Boerhaave described the syndrome of ruptured oesophagus in 1724 after performing the autopsy of Baron Jan Gerrit van Wassenauer, Grand Admiral of the Dutch Fleet, who had died of the condition as a consequence of vomiting after a large feast 3 days earlier.

Roy Calne recounts the following case:

'Some years ago I was on general surgery call and my registrar informed me that a man in his 50s had been admitted through A&E in a shocked state with terrible pains in the chest. He and his wife had been celebrating and after consuming a fair amount of gin, they both enjoyed a large curry dinner. Shortly after, the patient in question started vomiting profusely and this was associated with severe pain in the left side of the chest. X-ray of the chest showed opacification on the left side compatible with an oesophageal rupture. On thoracotomy, I found the lung collapsed and the pleural cavity full of strange small organisms approx. 1 cm in diameter and crescent shaped. It was only after aspirating the contents of the pleural cavity that the smell of curry became distinctive and the organisms revealed themselves to be small prawns cooked as a vindaloo. There was a rupture of the oesophagus which I sutured, and drained the chest. The patient recovered well and when sometime later I met him in

Cambridge, he told me had been climbing in the Himalayas and that he had followed my instructions not to mix gin with a large curry.'

In the original description of the syndrome, the poor patient, Baron van Wassenauer, was in agony for a long period, taking an unconscionable time to die.

LEO BUERGER (1879–1943)

Buerger's disease: thromboangiitis obliterans

Leo Buerger was born in Vienna, but his parents emigrated to the USA when he was 1 year old. He received his medical training at Columbia University, New York, and at the College of Physicians and Surgeons, graduating in 1901. He worked as surgical intern at the Lennox Hill Hospital, New York, and then at the Surgical Clinic in Breslau, Germany. He returned to New York, where he set up in private practice and also worked at Mount Sinai Hospital as surgical pathologist and also as urologist. In collaboration with F.Tilder Brown, he developed the Brown–Buerger cystoscope, which used a small electric bulb in the days long before fiberoptics. He was also particularly interested in arterial disease and in 1924 published a 628-page, lavishly illustrated monograph entitled 'The circulatory disturbances of the extremities, including gangrene, vasomotor and trophic disorders'. In 1929 he was appointed Professor of Urology at the College of Medical Evangelists in Los Angeles but returned to New York in 1934. He died in 1943.

In his book, he described the disease which bears his name, thromboangiitis obliterans. The patients are male, young adults and invariably heavy cigarette smokers. He considered the condition to occur particularly in Jews from eastern Europe and Russia. We know now that the disease is worldwide but it so happened that, in the 1920s, most of the patients at Mount Sinai New York were Jews from eastern Europe. There is still debate as to whether the condition represents a separate pathological entity or is a particularly severe form of arteriosclerotic arterial disease.

JEAN MARTIN CHARCOT (1825–1893)

Charcot's intermittent hepatic fever, Charcot joint, Charcot's triad, Charcot–Marie–Tooth disease

Jean Martin Charcot was the eldest son of a coach-builder in Paris. He and his three brothers were sent to school for a year on the understanding that the one who gained the best report would be permitted to study a learned profession. Jean Martin beat his brothers, studied medicine in Paris and, in 1862, was appointed superintendent at La Salpêtrière. In 1872, he was promoted to Professor of Pathology and, in 1882, to Professor of Diseases of the Nervous System. Here he created what must be regarded as the most popular neurological clinic to date. His demonstrations drew postgraduates from all over the world. He would stand before his large audience beside the patient on a flood-lit stage. He would then illustrate the various pathological gaits, facial contortions, spasms and postures with his own movements. He would follow up his patients who died by careful post-mortem examination. He died suddenly of a coronary thrombosis in 1893; his statue stands in front of his hospital.

Among the many conditions that bear his name is the 'intermittent hepatic fever' associated with jaundice that accompanies suppurative cholangitis, usually associated with gallstones in the common bile duct. Others include Charcot's joint – gross painless destruction of a joint due to a neuropathology (classically in neurosyphilis, but also seen in other neurological conditions including leprosy, syringomyelia and diabetic neuropathy), Charcot's triad (intention tremor, nystagmus and scanning speech) seen in brain stem involvement in multiple sclerosis, and Charcot–Marie–Tooth disease – amyotrophic lateral sclerosis.

Among his many lectures and papers can be found the first descriptions of intermittent claudication, disseminated sclerosis, peroneal muscle atrophy and the lightning pains of tabes dorsalis.

EDWARD COCK (1805–1892)

Cock's peculiar tumour: large ulcerated sebaceous cyst of scalp

Edward Cock was born in Tottenham, London, in 1805; his father was an underwriter at Lloyd's. In 1821 young Cock was apprenticed to his famous uncle, Sir Astley Cooper, and began his medical studies at the United Hospitals of Guy's and St Thomas's, which then stood opposite each other on either side of St Thomas's Street in Southwark. When the two hospitals separated their alliance, he followed Astley Cooper to Guy's, where he was appointed demonstrator in anatomy before he had even qualified; he passed his MRCS in 1828 and was appointed assistant surgeon in 1838, promoted to full surgeon in 1849. He continued on the staff until his retirement in 1871.

Cock was always popular with the Guy's students. When they established the Pupil's Physical Society at the medical school in 1836, Cock was elected as the first Honorary President and he continued in this office for the next 40 years.

At the Royal College of Surgeons, Cock became one of the first 27 Fellows to be appointed when this qualification was established in 1843. He went on to be elected to its Council, was an examiner and then elected President of the College in 1869.

He remained a bachelor until the age of 62, when he married a widow. They had no children but lived happily together until her death in 1886. Cock lived for nearly all his professional life a few yards away from the entrance to Guy's in St Thomas's Street. Among his patients were many of the rogues and thieves who lived in the surrounding slums. They treated him with great respect and never attempted to deceive or molest him. Cock was the first surgeon in this country to remove a set of dentures impacted in the cervical oesophagus by means of a lateral pharyngotomy.

Cock was particularly interested in urology. He devised a technique of intubating the bulb of the urethra via the perineum in cases of impassable urethral stricture, the knife being guided by a finger in the rectum. This was a great advance on the cruel attempts of forcible blind passage of sounds per urethram.

He had a great sense of humour – he would say ‘With a name like Cock, I was fated to be a urologist’.

The ‘peculiar tumour’ recorded by Cock in the Guy’s Hospital Reports of 1853 refers to an elderly lady who came to his outpatient clinic wearing a curious hat, shaped rather like a large Egyptian fez, and complaining of a lump on her scalp. This had been present for no less than 47 years and was now bleeding from time to time. On removing the hat, an enormous vascular ulcerating and bleeding mass was revealed. However, when this was removed (with torrential bleeding), it proved to be a very large ulcerating benign sebaceous cyst. It was a ‘peculiar tumour’ because it looked so obviously malignant and yet proved to be entirely benign.

In his old age, Cock retired to Kingston on Thames, where he died in 1892.

LUDWIG COURVOISIER (1843–1918)

Courvoisier’s law

A most useful clinical sign in the examination of the abdomen in the presence of jaundice is Courvoisier’s sign, which states ‘In the jaundiced patient, if the gallbladder is palpable, the jaundice is unlikely to be due to stones, and therefore, by elimination, is due to a carcinoma at or around the head of the pancreas’.

This law was first published in Courvoisier’s book *The Pathology and Surgery of the Gall Bladder*, which was published in 1890 and was based on over 450 operations which he had performed personally on the gallbladder and its duct system.

Ludwig Courvoisier was born in Basle, Switzerland, in 1843. His father was a Swiss merchant and his mother the daughter of an English clergyman. As a boy, he lived in Malta and had an excellent knowledge of the English language.

Courvoisier was a medical student in Göttingen and Basle, where he graduated in 1868, at the very beginning of the antiseptic era (Lister published his work on antiseptic surgery in a series of articles in *The Lancet* in 1867). Interestingly, his first chief was Professor Socin in Basle, who was an early disciple of Lister in continental Europe. Courvoisier then studied

under Ferguson and Spencer Wells in London and Billroth and Czerny in Vienna.

In the Franco-Prussian war of 1870, Courvoisier served in a military hospital in Karlsruhe and then was appointed to the surgical staff at Riehan, a small city, five miles from Berne, where he worked for the next 30 years. It was not until he was 57 that he was appointed Professor of Surgery in the University of Berne in succession to his old chief, Professor Socin.

Courvoisier’s great interest was the surgery of the biliary tract and he pioneered the removal of common duct calculi. He died at the age of 75, one of the great figures of Swiss surgery. It is appropriate that his name is remembered to this day in this useful clinical law.

BURRILL BERNARD CROHN (1884–1983)

Regional ileitis

Burrill B. Crohn’s name came before the public eye in 1932 in a paper published in the October issue of the *Journal of the American Medical Association* entitled ‘Regional ileitis; a pathological and clinical entity’. Crohn’s co-authors were Leon Ginzburg and Gordon Oppenheimer, all three from Mount Sinai Hospital, New York. This classic paper described a series of patients with chronic inflammatory disease affecting particularly the terminal ileum in young adult patients. Crohn believed that the disease was due to *Mycobacterium paratuberculosis*, which is responsible for a similar condition in cattle (Johne’s disease), but in spite of intensive studies to this day, no specific organism has been incriminated, nor is there response to antibiotic treatment.

In the 1960s it became evident that this pathology, although most common in the terminal ileum, can affect any part of the alimentary tract from the mouth to the anal verge, as well as demonstrating systemic effects.

Burrill B. Crohn was born in New York in 1884. He qualified in medicine at Columbia University, College of Physicians and Surgeons in 1908. He set up in private practice as physician in New York and was closely associated with Mount Sinai Hospital, becoming Chief of Gastroenterology there in 1920. He built up an enormous practice, particularly in inflammatory bowel disease. His most famous patient was

President Dwight Eisenhower, who was operated upon for Crohn's disease in 1956.

Crohn continued to see patients until the age of 90. He died at his country home in Connecticut in 1983 at the age of 99.

HARVEY CUSHING (1869–1939)

Cushing's syndrome, Cushing's ulcer, Cushing's reflex

Cushing had a life-long interest in diseases of the pituitary gland. In 1912 he published a monograph entitled 'The pituitary body and its disorders' with 47 carefully documented cases. One at least was an example of his syndrome. Over the years, he observed a number of these cases but since they did not develop visual difficulty or signs of increased intracranial pressure, they were seldom subjected to operation or come to autopsy. It was not until 1932 that he was able to describe the association of a basophilic tumour of the pituitary with this striking clinical syndrome. Nowadays, the clinical features described by Cushing are most often seen in patients on therapeutic steroid administration. About 10% are due to benign or malignant adrenocortical tumours or rarely due to ectopic adrenocorticotrophic hormone production by a distant tumour, in particular a carcinoma of the bronchus.

Cushing's ulcer is the rare occurrence of a peptic ulcer with a head injury, while the Cushing reflex is slowing of the pulse and raised blood pressure in cerebral compression, for example, from an extradural haematoma.

Harvey Cushing was born in Cleveland, Ohio, in 1869. His father was Professor of Obstetrics and both Harvey's grandfather and great-grandfather were physicians. Cushing graduated in medicine at Harvard in 1895. He interned in Boston, then became assistant to William Halsted at the Johns Hopkins Hospital in Baltimore. Here he became increasingly interested in the surgery of the nervous system and specialized in this field from 1902 onwards. Much of his early work was in removal of the trigeminal ganglion for trigeminal neuralgia.

It was while working in Kocher's laboratory in Berne, Switzerland, that Cushing described his reflex

by producing raised intracranial pressure in the dog skull, using an inflated balloon.

In 1912 Cushing was appointed Professor of Surgery at the Peter Brent Brigham Hospital in Boston. Here he established a school of neurosurgery whose disciples spread across the western world. At the end of his career, he was operating on some 200 brain tumours annually. He worked slowly and in complete silence – a craniotomy would take up to 8 hours to complete.

He devised many of the standard techniques used in neurosurgery today, such as surgical diathermy, which he developed with the physicist William Bowie, the silver clips for haemostasis that bear Cushing's name, and the use of suction to maintain a clear operative field.

During the First World War, he took a neurosurgical team to France in 1915, before America had entered the war. He returned to France in 1917, becoming the senior consultant in neurosurgery to the American Expeditionary Force. During this time he introduced the electromagnet to remove ferrous metallic foreign bodies from the brain and demonstrated the value of suction in removal of pulped brain from cerebral gunshot wounds.

Cushing was a prolific writer. In addition to his book on the pituitary, he wrote monographs on acoustic tumours, meningiomas and the classification of gliomas. In 1932 he published a report on his 2000 verified brain tumours.

His biography of his close friend and mentor, Sir William Osier, gained him the Pulitzer Prize.

Cushing retired from surgical practice in 1932 and became Professor of Neurology at Yale. A heavy smoker, his last years were marred by severe leg ischaemia and he died of coronary thrombosis just after the outbreak of the Second World War in Europe, on October 7th 1939.

JAMES DOUGLAS (1675–1742)

Pouch of Douglas, arcuate line of Douglas

James Douglas was born in Baads, Scotland, in 1675. He obtained his MD in Rheims, then returned to

London, where he taught anatomy, carrying out dissections at his home, and also practised obstetrics. He was appointed physician to Queen Caroline and was elected FRS in 1706. He was the first to prepare a comprehensive bibliography of medical publications.

In 1730 he published 'A description of the peritoneum and of that part of the membrana cellularis which lies on its outside'. In this, he briefly mentions, in a sentence, the rectouterine peritoneal pouch. It is this cul de sac into which intraperitoneal fluid readily collects and which can be detected on rectal and vaginal examination.

The line of Douglas is the linea semilunaris at the lower aspect of the posterior rectus sheath that allows access of the inferior epigastric vessels into the sheath.

James Douglas demonstrated at autopsy that when the urinary bladder is distended with water, it rises above the pubis, pushing the bladder extraperitoneally behind the lower anterior abdominal wall. This finding he demonstrated to his brother, John Douglas, surgeon at Westminster Hospital, who practised lithotomy, 'cutting for the stone', through the standard perineal approach. As a result of his brother's findings, John proceeded to operate on four boys with bladder stone by filling the bladder with water, pushing the stone forwards with the fingers of the left hand in the rectum and then cutting down onto the stone through an incision in the lower abdomen. Three of the boys recovered and were demonstrated at the Royal Society; John was elected a Fellow (FRS). Other surgeons took up this technique, in particular William Cheselden, but its high complication rate made surgeons revert to the perineal route until the modern surgical era.

CUTHBERT ESQUIRE DUKES (1890–1977)

Dukes' staging of rectal tumours

The Dukes' classification of the staging of carcinomas of the rectum (which was extended to include all large bowel tumours) represented the first major step in a logical classification of tumour spread – a valuable tool in prognosis. In recent years it has been modified to include presence or absence of spread of tumour to the local venous drainage and today is being replaced

by the universal TNM (Tumour, Node, Metastases) classification.

Cuthbert Dukes was born in 1890. He qualified in medicine at the University of Edinburgh in 1914, at the outbreak of the First World War, and served throughout the war as a medical officer in the Royal Army Medical Corps attached to the Rifle Brigade. He was decorated with the OBE (Order of the British Empire). After the war, he trained as a junior bacteriologist at University College, London.

In 1922 he joined St Mark's Hospital, then in the City Road, London, as its first pathologist. St Mark's was then perhaps the leading centre in the world for rectal diseases, in particular rectal cancers. Dukes proceeded to carry out meticulous pathological studies of the rectal cancers removed by his surgical colleagues by abdominoperineal excision of the rectum. Each tumour he first mounted and then dissected. He correlated the staging of these tumours with the careful clinical follow-up of the patients and was thus able to correlate staging of the tumour with patient prognosis. Initially, in Dukes' 1930 paper in the *British Journal of Surgery*, he divided tumours into 'A', growth confined to the rectal wall, 'B', penetrating the wall and 'C', involving the regional lymph nodes. In his 1935 paper, in the same journal, he further divided lymphatic spread into 'C1', nodes involved near the primary tumour, and 'C2', where nodes were involved up to the level of the vascular pedicle, and showed that this refined still further the survival rate/tumour spread correlation.

Apart from this important work, Dukes also studied familial polyposis coli, establishing a registry and family follow-up of this condition. He worked on the classification of prostatic and bladder tumours at the Institute of Urology, at St Peter's Hospital, whose staff he joined in 1929. During the Second World War Dukes visited large numbers of colostomy patients in their homes; his work did much to establish the Ileostomy Association in this country.

In recognition of his contributions to surgery, Dukes was elected an Honorary Fellow of the Royal College of Surgeons in 1950 and was appointed a Hunterian Professor of the College 2 years later.

Cuthbert Dukes was a kind, gentle and helpful Quaker with a great interest in the trainee pathologists and surgeons at his hospitals. He died peacefully at home in Wimbledon in 1977.

GUILLAUME DUPUYTREN (1777–1835)

Dupuytren's contracture

Dupuytren's contracture is a common condition, usually of the elderly, and much more frequent in men than in women. There is fibrous contracture of the palmar aponeurosis, which produces a flexion deformity of the finger at the metacarpophalangeal and proximal interphalangeal joints, usually starting at the ring finger, then affecting the little finger and sometimes the middle finger. As the palmar aponeurosis only extends to the middle phalanx, the distal interphalangeal joint is never affected. Indeed, in advanced cases, the terminal phalanx may be hyperextended into the palm of the hand. Occasionally, the plantar aponeurosis on the sole of the foot may be affected, although, when present, it may remain undetected by the patient. In spite of its frequency, its aetiology remains a mystery.

How did such a common entity, which must date back to earliest times and which is so easy to identify, be named after a surgeon of the early 19th century? The fact is that it was regarded as being due to contractures of the flexor tendons of the fingers. Dupuytren carefully dissected the upper limb of a subject with this condition at autopsy. Removal of the skin had no effect on the contracture. Removal of the underlying thickened aponeurosis enabled him to straighten out the fingers completely – the tendons were normal!

Guillaume Dupuytren was born in 1777 at Pierre-Buffière, a small town in central France. His father was a lawyer with a small practice and little money. Dupuytren studied medicine in Paris although he was almost penniless; there is a story, probably apocryphal, that he used the fat from cadavers in the dissecting room to make oil for the lamp he studied by. In 1802 he qualified and, at the age of 25, became a surgical intern at that repository of pathology, the Hôtel Dieu. The following year he published a small book, *Propositions on several points in Anatomy*. Within 11 years, he was appointed surgeon in chief, with unlimited opportunities for the two things he loved – surgery and teaching.

For the next 30 years, Dupuytren laboured at his duties. His first rounds were at six in the morning; his

evening rounds were at seven, to visit postoperative patients and any others whose condition was serious. He was a brilliant bedside teacher, whose rounds and clinical lectures attracted crowds of students and postgraduates. As an operator, in those pre-anaesthetic days, he showed perfect self-control. He pioneered amputation of the mandible, amputation of the uterine cervix for cancer, ligation of the subclavian artery and colostomy (bringing out a loop of colon through a lumbar incision). Dupuytren was cold, overbearing and parsimonious – no doubt the legacy of his penniless youth. He was called by his contemporaries 'the first of surgeons and the least of men' and 'the brigand of the Hôtel Dieu'.

In November 1833, he suffered a stroke while engaged on a ward round at the Hôtel Dieu and was obliged to give up work. He died on February 8th 1835 at the age of 57, having, as one admirer wrote, 'lifted himself from the most humble to the highest rank, and added another name to the glories of France'.

WILHELM HEINRICH ERB (1840–1921)

Erb's paralysis

Wilhelm Erb, a leading neurologist of his day, was born at Winnweiler, in Bavaria, in 1840. His father was a forester. He commenced his medical studies at the University of Heidelberg, continued them in Erlangen and received his medical degree at Munich in 1864. After a short period spent in the study of pathology, Erb returned to Heidelberg and rapidly gained a reputation as an original worker and writer. In 1880 he was appointed Professor of Medicine at Leipzig, but after 3 years he returned as professor to his old university of Heidelberg and remained there, in spite of invitations to other centres, to carry out his important researches.

In 1886, Erb introduced the use of electrical stimulation of nerves in both diagnosis and treatment of neurological problems. He published textbooks on diseases of nerves and of the spinal cord and on the muscular disorders. He introduced the now everyday term 'the tendon reflex'. In 1874, Erb published a classic paper entitled 'Concerning an unusual localization of brachial plexus paralyse' in which he

describes four examples in adult patients of lesions involving the roots of C5 and C6. In addition, he added the case of an infant, delivered 2 months previously after version and subsequent forceps extraction. He stated 'It is probable that the lesion in the cases mentioned was localized to the 5th and 6th cervical roots or at their anterior branches or at the junction of them both'. Erb's studies on neurosyphilis, the muscular dystrophies and myasthenia gravis were also of great importance. Not only was Erb a great investigator, he was also a brilliant diagnostician and clinical teacher. He died in 1921, at the age of 81, of a cerebral haemorrhage, which he suffered while attending a classical music concert.

THOMAS J. FOGARTY (contemporary)

Fogarty embolectomy catheter

Thomas Fogarty attended medical school at the University of Cincinnati College of Medicine in 1960. He trained in both general and cardiothoracic surgery at the University of Oregon in Portland and worked at the National Heart Institute in Bethesda from 1965 to 1967. He returned to Oregon as instructor in surgery, then moved to Stanford University in 1979, practising cardiovascular surgery and being appointed professor there in 1993.

It was shortly before his graduation in 1960 that Fogarty developed his embolectomy catheter, which revolutionized the management of peripheral emboli and which must have saved millions of limbs and lives. He holds more than 60 patents in surgical instrumentation, including his AneuRx stent graft, for the endovascular treatment of aortic aneurysms. Truly a remarkable contributor to modern vascular surgery.

ROBERT GRAVES (1796–1853)

Graves' disease, hyperthyroidism

The term 'Graves' disease' is commonly used in English-speaking countries to denote hyperthyroidism. This is based on his short paper, which he published

in 1835, entitled 'Palpitation of the heart with enlargement of the thyroid gland' in which he describes three women with tachycardia associated with thyroid enlargement, one of whom had exophthalmos. Five years later, Karl von Basedow, a physician in Merseberg, Germany, published a long and detailed account of three female and one male patient in which he reported pretty well all the clinical features of primary hyperthyroidism associated with exophthalmos. In Germany, the condition is termed 'Basedow's disease'.

However, if precedence is to be given its due, Caleb Hillier Parry, physician at the General Hospital, Bath, in a paper published after his death in 1825, entitled 'Enlargement of the thyroid gland in connection with enlargement or palpitation of the heart', gave a superb description of eight patients with what today would be labelled 'primary hyperthyroidism'. Perhaps if an eponym should be used for this condition, it should be 'Parry's disease'!

Robert Graves was born in Armagh, where his father was Dean. After a brilliant student career at Trinity College, Dublin, and 3 years of postgraduate work in Europe, he was elected to the medical staff of the Meath Hospital, Dublin. Here he soon established himself as a brilliant clinical teacher, enhanced by his tall and distinguished presence. He summarized his teachings in his *Clinical Lectures*, published in 1848. Graves insisted that his students actually examined their patients as well as taking their clinical history! He timed the pulse with a watch, in addition to merely palpating it, and abandoned the practice of bleeding and starving patients with fever. He used to say that his epitaph should read 'He fed fevers'!

ALEXIS FRANK HARTMANN and SYDNEY RINGER

Sydney Ringer (1834-1910) worked both at University College Hospital, London, and Great Ormond Street before becoming Professor of Material Medica and Therapeutics, and eventually becoming Professor of Medicine at the University of London. He was interested in the effects of different electrolyte solutions on the contraction of a frog heart, and these studies led to him developing a solution, Ringer's solution, that

could allow cells and organisms to function normally. Ringer's solution is an isotonic solution of sodium, potassium and calcium chloride.

Alexis Frank Hartmann (1898-1964) should not be mistaken for Henri Hartmann (1860-1952), who devised the colectomy operation described in Chapter 26. Alexis Hartmann was an American paediatrician and biochemist who worked in St Louis. He modified Ringer's solution by adding lactate in an effort to produce an alkalinising solution; lactate is metabolised by the liver by oxidation and gluconeogenesis generating glucose and bicarbonate. Compound sodium lactate solution (Hartmann's solution) contains 29mmol/L lactate, in addition to physiological amounts of sodium, potassium, calcium and chloride.

GEORGE GREY TURNER (1877–1951)

Grey Turner's sign in acute pancreatitis

In 1919, Grey Turner published an account in the *British Journal of Surgery* of the discoloration of the abdominal wall which may be found in acute pancreatitis. This paper described two patients, both of whom died of fulminating pancreatitis. The first had an area of bluish discoloration about 15 cm in diameter around the umbilicus and the other, illustrated by a splendid black and white photograph, had greenish discoloration in the loins. He attributed the first to retroperitoneal fluid tracking along the falciform ligament and the second to fluid extravasating retroperitoneally to the flanks. Although these signs are rare, the tracking of pancreatic fluid into the retroperitoneum is commonly visualized on computed tomography in this condition.

George Grey Turner was born in 1877 in North Shields, the son of a bank clerk. He gained a scholarship to the Medical School of the University of Durham, at Newcastle upon Tyne, and graduated in 1898. After house officer posts in Newcastle, he worked at King's College Hospital and in Vienna, and was appointed to the surgical staff at the Royal Victoria Infirmary, Newcastle, in 1906. During the First World War, he served as a colonel surgical specialist in the Middle East.

In 1927 he was appointed Professor of Surgery at the University of Durham until 1935, when he was appointed Foundation Professor of Surgery at the newly opened Postgraduate Medical School at Hammersmith Hospital, London.

Grey Turner was a master surgeon. His particular forte was major operative procedures, including oesophageal surgery, ureteric transplantation for ectopia vesicae, block dissection of the neck and excision of rectal cancer. He was also a wonderful clinical teacher. One of the authors (H.E.) can vividly remember a clinical demonstration that Grey Turner gave to the students at the old Radcliffe Infirmary in Oxford in 1951. He was a short man, dressed in a black jacket and striped trousers, heavy black boots and wearing a very old bowler hat on his large head. We hung onto every word. Among his remarks that I jotted down and carefully preserved were:

'To detect vessel pulsation you want any amount of time and patience'

'We mustn't neglect the neurotics';

'In examination warmth and light make all the difference'

'Especially suspect diabetes when there is gangrene in a rather atypical place, for example the dorsum of the foot or the breast'

'Seeing the vomit itself – oh! what an important thing!'

This wonderful man, who lived for surgery, died in 1951.

THOMAS HODGKIN (1798–1866)

Hodgkin's disease

Thomas Hodgkin, whose name is firmly associated with the most common variety of lymphoma in the western world, was not appreciated in his day; indeed, his career might be regarded as a failure. He failed to get onto the staff of his hospital, had little success in practice, eventually gave up medicine and died of dysentery in Jaffa.

Thomas Hodgkin was born in London of a Quaker family in 1789. His father was a fashionable tutor of mathematics and classics to young ladies. Thomas studied medicine at Guy's Hospital and qualified with

an MD Edinburgh in 1823. He visited Paris, learned to use the new-fangled stethoscope from none other than its inventor, Rene Laennec, and brought one back to London with him. Few of his contemporaries were interested in this 'contrivance', as they called it.

Believing that a knowledge of pathology would make him a better physician, Hodgkin became curator of the museum and lecturer in pathology at Guy's in 1825. Over the next few years, he published an extensive catalogue of the museum's specimens. In 1832 he published his paper entitled 'On some morbid appearances of the absorbent glands and spleen' in the *Journal of the Medical and Chirurgical Society*. In it, he describes six cases at Guy's Hospital and a seventh under the care of Lugol in Paris; a fatal condition, distinct from tuberculosis, which affected the lymph nodes throughout the body.

In 1926, the material, carefully preserved in the Gordon Museum at Guy's, was examined histologically for the first time. Three of the specimens would now be called Hodgkin's disease, one an example of non-Hodgkin's lymphoma, one was syphilitic and one tuberculous. The specimens are still proudly on view in the museum today. Hodgkin's paper attracted little attention at the time and it was not until 1865 that the Guy's physician Sir Samuel Wilks, in describing a large series of cases in the Guy's Hospital Reports, drew attention to Hodgkin's work and gave the disease its eponymous name.

Disappointed by his continued failure to be appointed to the medical staff at Guy's, which was no doubt due to his 'revolutionary' views about the treatment of the 'aboriginals', the name applied to the victims of the slave trade, Hodgkin gave up his medical practice in 1837 and devoted himself to charitable works and social reform. He accompanied his Jewish friend, the philanthropist Sir Moses Montefiore, on a mission to relieve the Jews in Palestine and died of dysentery in Jaffa at the age of 68. Thomas Hodgkin lies buried in the small Christian cemetery in Jaffa, now a suburb of Tel Aviv. Sir Moses arranged for an obelisk to be erected over his grave, on which is inscribed:

'Here lies the body of Thomas Hodgkin MD, a man distinguished alike for scientific attainments, medical skills and self-sacrificing philanthropy. He died at Jaffa the 4th April 1866, in the 68th year of his age in the faith and the hope of the Gospel'

JOHN HUNTER (1728–1793)

Hunter's canal, subsartorial canal

Hunter's best known contribution to technical surgery was his operation of ligation of the femoral artery in the subsartorial canal for aneurysm of the popliteal artery. This was a common disease in his day, no doubt as the result of repeated pressure from the top of the long riding boot in coachmen and horse riders. Up to Hunter's time, surgeons either refused to operate or tied the artery immediately above the aneurysm, where the vessel was frequently diseased and could easily rupture. Specimens of Hunter's original cases of this disease, as well as the successful outcome of his first ligation, obtained years later after the patient had died of other causes, can be seen today in the Hunterian Museum of the Royal College of Surgeons in London.

John Hunter was the first surgeon to apply the inductive system of observation and experimentation to the study of disease. He also realized that to understand the effects of a disease process, it was first necessary to study the form and function of the healthy individual. John Hunter was born on a farm on the outskirts of Glasgow, the youngest of 10 children. As a boy, he disliked his school lessons but delighted in natural history, which he studied first hand in the fields and woods. At the age of 20, John joined his brother William, 10 years his senior, who had established himself in London as a highly popular anatomy teacher, as well as a successful obstetrician (he was later to deliver Queen Charlotte of the future King George IV). John proved to have a brilliant flare for anatomy, worked as William's assistant and studied surgery under William Cheselden and Percival Pott.

In 1760, John joined the army as surgeon and gained considerable experience of war surgery in Portugal and in the campaign at Belle Isle. In 1768 he was appointed surgeon at St George's Hospital, London. He suffered from angina and died in 1793 at the age of 65 of a heart attack after a particularly aggravating board meeting at his hospital.

Among the large number of Hunter's contributions may be listed his studies on descent of the testis (he described and named the gubernaculum testis), his

studies of fat absorption by the lacteals of the intestine, his investigations of bone growth, blood supply of the placenta, proof that the seminal vesicles were not, in fact, reservoirs of the sperm, and studies on the grafting of teeth. As the result of his inoculation studies, he wrongly concluded that syphilis and gonorrhoea were manifestations of the same disease.

An important part of Hunter's contribution to surgery was the way he inspired many of his surgical students to follow his experimental methods. Among them can be listed Benjamin Bell, Henry Cline, Everard Home (who became his brother-in-law), John Abernethy and, most famous of all, Astley Cooper of Guy's Hospital. Students came to him from America, including Philip Syng Physick, who is often regarded as the father of American surgery.

His monument today is the Hunterian Museum in London, which houses many of his original specimens and preparations.

MORITZ KAPOSÍ (1837–1902)

Kaposi's sarcoma, multiple idiopathic haemorrhagic sarcoma

Kaposi's sarcoma was an uncommon cutaneous malignant tumour, said to be most frequently seen in elderly eastern European men. It has only come to prominence since the early days of the acquired immunodeficiency syndrome (AIDS) when it became recognized as a common, highly virulent tumour occurring in this disease.

Moritz Kaposi was born Moritz Kohn, of Jewish parents in 1837 in Kaposvar, Hungary. He studied medicine in Vienna, qualifying MD in 1861. He became assistant to Professor F. von Hebra at the University Hospital in Vienna, probably the most eminent dermatologist of his time, and worked under him from 1866 to 1869; he married his chief's daughter. After terms as privadozent and assistant professor, he was appointed to the Chair of Dermatology on Hebra's death in 1881 and remained in that post until his own death in 1902.

Kaposi had an enormous practice. His clinics saw patients and doctor visitors coming to him from far and wide. He had the ability to seize upon the essentials of a case and convey them clearly to his visitors.

He completed Hebra's major textbook of dermatology as well as writing his own, which dealt not only with the clinical features of the diseases but also pathology and therapy and the relationship of skin diseases to the body as a whole. Hebra was a charming man, an excellent speaker and took a leading part in the organization of both national and international dermatological societies. Kaposi gave a detailed description of the cutaneous lesions of the tumour that bears his name. He notes that it arises first on the feet, then hands, then arms and trunk, with ulceration and then gangrene. Later, nodules form on the mucosa of the larynx, trachea, alimentary canal and liver. He states, 'the disease ends in death within the short space of time of two or three years'.

AUGUSTE DEJERINE- KLUMPKE (1859–1927)

Klumpke's palsy

Madame Auguste Klumpke was born in San Francisco but, at an early age, her mother took her and her three sisters to Lausanne to be educated. Auguste entered the medical faculty of the University of Paris and qualified MD in 1888. While still a medical student, she read Erb's paper on lesions of the upper segments of the brachial plexus, and studied the consequences of injuries of the lower trunk or distal medial cord of the plexus. These might result from such accidents as clutching a ledge to break a fall or in pressure from a cervical rib, injuring the first thoracic, and sometimes also the eighth cervical segment of the brachial plexus. This part of the plexus could also be involved in birth injuries. The muscles of the hand are wasted, there is sensory loss on the ulnar side of the forearm and there may be an associated Horner's syndrome from associated damage to the sympathetic fibres passing from the adjacent inferior cervical ganglion.

Her paper was published while she was still a medical student. In the final year of her studies, she met and married a young neurologist who was also to achieve distinction, Jules Déjerine, and she took the name Klumpke-Déjerine. She assisted her husband in his important text on the anatomy of the central nervous system. When he died in 1917, she founded

a research laboratory in his memory and to carry on his work.

Auguste Klumpke died in 1927 aged 68, having been President of the French Neurological Society and having been appointed an Officer of the Legion of Honour.

BARRY MARSHALL and ROBIN WARREN (contemporary)

Helicobacter pylori and the aetiology of peptic ulcers

For more than a century, peptic ulceration, as its name implies, was believed to be due to the malign effect of peptic juice. Gastric and duodenal (confined to the first part of the duodenum) ulcers were associated with hydrochloric acid in the stomach. This could also produce mucosal erosion on reflux into the oesophagus and also in the jejunum if a gastrojejunostomy had been performed. Peptic ulceration is a rare but well-recognized occurrence in a Meckel's diverticulum when this occasionally has ectopic oxyntic cells in its mucosa. Moreover, over this period, treatment of peptic ulcer depended medically on the use of a wide range of antacids or of inhibitors of acid secretion, or removal of the acid secretory part of the stomach by partial gastrectomy or by division of the secretomotor vagal nerves (vagotomy).

In 1892 an Italian pathologist in Turin, Giulio Bizzozero, reported the observation of 'spirillae' (spiral organisms) in the stomach of the dog. Since then, sporadic reports of such organisms appeared – their resistance to acid being due to their ability to split urea by means of a urease and thus 'protect' themselves from the gastric hydrochloric acid.

In 1979, Robin Warren at the Royal Perth Hospital in Australia observed spiral bacteria in gastric biopsy specimens obtained at endoscopy. With Barry Marshall, then a Gastroenterology Fellow, he showed that these organisms were present in most of the biopsy specimens taken from patients with active chronic gastritis, or with duodenal or gastric ulcers and succeeded in culturing *Helicobacter pylori*, a flagellate, Gram-negative micro-aerophilic organism. In 1984, Marshall, who was shown to have a normal gastric and duodenal

mucosa at gastroscopy, ingested a preparation of *H. pylori* and developed severe acute gastritis, confirmed at further endoscopy. The gastritis responded rapidly to a week of the antibiotic tinidazole.

Treatment of patients with peptic ulcer and gastritis with antibiotics (together with added bismuth preparations, also shown to kill *H. pylori*) was shown to be highly effective.

In 2005 Marshall and Warren received the Nobel Prize in Physiology or Medicine. Barry Marshall is currently Clinical Professor of Microbiology at the University of Western Australia, Perth, while Robin Warren is now Emeritus Consultant Pathologist at the Royal Perth Hospital.

JOHANN FRIEDRICH MECKEL THE YOUNGER (1781–1833)

Meckel's diverticulum, Meckel's cartilage

Diverticula of the intestine must have been observed from time to time by the early anatomists, but it was not until 1810, when Johann Meckel wrote an exhaustive paper on the subject, that their significance was realized. The mnemonic that Meckel's diverticulum (the only named diverticulum of the intestine) is 2 inches long, occurs 2 feet from the ileocaecal junction and occurs in 2% of the population is very much an approximation of the truth. In fact, the diverticulum can vary in length from 1 to 26 cm and can be found anywhere from 15 to 150 cm from the ileocaecal valve.

J. F. Meckel the younger was born in 1781 in Halle, Germany. His grandfather, also named Johann Friedrich, was Professor of Botany, Obstetrics and Anatomy in Berlin. He described the sphenopalatine ganglion (Meckel's ganglion) and the space that contains the trigeminal ganglion (Meckel's cave). His father was Philip Friedrich Meckel, who was Professor of Anatomy and Surgery in Halle, while his younger brother, August, was Professor of Anatomy at Berne, Switzerland.

J. F. Meckel the younger studied medicine in Halle, Göttingen, Würzburg and Vienna and graduated MD at his native city in 1802. He then embarked on an extended study tour through Holland, France, Italy

and England, before returning to Halle in 1806. Two years later, he succeeded to his father's Chair of Anatomy and Surgery at Halle, where he outstripped the other members of his family in fame.

Meckel was a distinguished pathologist, comparative anatomist and embryologist. He described the first branchial cartilage, around which the mandible develops, leaving its proximal end to form the malleus, one of the ossicles of the middle ear.

Meckel published important treatises on comparative, pathological and normal human anatomy. The museum at Halle, begun by his grandfather and added to by his father, was enlarged extensively by Meckel the younger and became one of the finest collections of anatomy and pathology in Europe.

SIR JAMES PAGET (1814–1899)

Paget's disease of the nipple, bone and penis, osteitis dissecans, spontaneous thrombosis of the axillary vein

Sir James Paget was a remarkable clinical observer and surgical pathologist, who described a whole series of clinical entities. He is best remembered by his description of what he termed osteitis deformans, in 1877. One patient, observed over 22 years and finally dying of neoplastic change in the left radius, is described in great detail, including an autopsy report. He refers to four other patients of his own and to previous reports of three other cases, one by Sir Samuel Wilks of Guy's Hospital. This common disease, still of unknown aetiology, is usually referred to as Paget's disease of bone.

In 1874 Paget described 15 cases of 'a disease of the mammary areola preceding cancer of the mammary gland, now often referred to as 'Paget's disease of the nipple'. A similar condition of the penis is usually entitled the erythroplasia of Queyrat. Several other lesions, previously unrecognized, were documented by this great clinical observer.

James Paget was born in Great Yarmouth in 1814. His father was a wealthy brewer and ship owner, whose businesses failed when James was 13. For many years James suffered penury and laboured diligently to pay off his father's debts. At the age of 17, young Paget was

apprenticed to the local apothecary. In his leisure time, James, together with one of his brothers, wrote an extensive study of the flora and fauna of the local countryside. In 1834, Paget entered St Bartholomew's Hospital as a medical student. In his first year he made his first original discovery; he described the worm *Trichinella spiralis* as the cause of the curious bony spicules which could be observed in the muscles of cadavers in the dissecting room. Paget qualified MRCS in 1836, having gained most of the prizes available in the medical school. For the next few years, with no private means, he worked as sub-editor of the *Medical Gazette*, lectured in pathology, was curator of the Pathology Museum at Bart's, for which he produced an extensive catalogue, and carried on a miniscule surgical practice.

Finally, in 1847 he was appointed assistant surgeon at St Bartholomew's at the age of 33. He was made full surgeon in 1861. Once on the staff at Bart's, Paget rapidly built up an enormous private practice based not on his surgical expertise but on his superb knowledge of clinical medicine and pathology. His advice was widely sought about rare and difficult surgical problems. An average working day would be 16 hours long and there were frequent long journeys by train to see patients in distant parts of the country, as well as calls overseas. He was surgeon to Queen Victoria for 41 years and to Edward the Prince of Wales for 36 years.

James Paget served on the Council of the Royal College of Surgeons and was its President in 1871, the year he was appointed a baronet and the year also when he retired from active surgical practice, although continuing to see patients for many more years.

He died just before the new century, on 30 December 1899.

HENRY PANCOAST (1875–1939)

Pancoast's tumour of the lung apex

Henry Pancoast was perhaps the most outstanding of a small group of physicians in the early years of the 20th century who combined the newly evolving sciences of radiology and radiotherapy. His name today is eponymously attached to the tumours situated at the apex of the lung.

In 1924, Pancoast presented a paper in the *Journal of the American Medical Association* entitled ‘The importance of careful roentgen-ray investigations of apical chest tumors’ in which he reported three examples of what seemed to be a new entity among intrathoracic tumours. In 1932 he was able to add details of four more patients. These tumours occurred in the apical region of the lung and presented with pain around the shoulder and down the arm, Horner’s syndrome (suggesting invasion of the cervical sympathetic chain) and atrophy of the small muscles of the hand.

Radiologically, there was a small homogenous shadow at the lung apex, always local rib destruction and often vertebral infiltration. Death occurred as a result usually of what seemed to be a comparatively small growth without detectable radiological metastases. Pancoast postulated that the tumour, which he labelled ‘superior pulmonary sulcus tumour’, might arise from some embryonal rest. He suggested treatment to be irradiation followed by radon implants inserted at surgical exposure. Nowadays, these tumours are regarded as bronchial carcinomas arising at an atypical site.

Henry Pancoast was born in Philadelphia in 1875, the son of a physician. He qualified in medicine at the University of Pennsylvania in 1898. After a period as instructor in surgery, he entered radiology and was appointed ‘skiagrapher’ at the University Hospital, Philadelphia, in 1902. From his earliest days, he set up a careful cross-index of the pathology of his cases and published a large series of clinical/radiological reports.

In 1912, Pancoast was appointed President of the American Roentgen Ray Society and became the first Professor of Roentgenology in the USA. He was one of the pioneers of radium therapy and served as President of the American Radium Society. His other interest, apart from neoplastic diseases, was the pneumoconioses.

PERCIVAL POTT (1714–1788)

Scrotal cancer, Pott’s fracture, Pott’s disease of the spine, Pott’s puffy tumour

Percival Pott was a remarkable clinical observer, as commemorated by the diseases he described. He was the first to associate scrotal cancer, which was

common in child chimney sweeps, with the effects of the soot (now known to contain carcinogenic hydrocarbons). In addition, his name is associated with his descriptions of tuberculosis of the spine and its associated paraplegia, with fracture dislocation of the ankle and the cutaneous swelling (‘puffy tumour’), and osteomyelitis of the frontal bone secondary to frontal sinusitis.

Percival Pott was born in Threadneedle Street in the City of London in 1714; his father was a scrivener (a drafter of legal documents). At the age of 15, young Pott was apprenticed to Edward Nourse, then assistant surgeon at St Bartholomew’s Hospital. In 1736 Pott passed the searching examination to obtain the Grand Diploma of the Barber Surgeon’s Company, corresponding in some respects with obtaining the diploma of the Fellowship of the Royal College of Surgeons. In 1744, he was appointed assistant surgeon at Bart’s and in 1749 became full surgeon. He soon acquired a great reputation as a teacher, and is attributed with pioneering the introduction of the lecture demonstration format of teaching. He wrote extensively on a wide range of surgical topics.

Pott retired from the staff of St Bartholomew’s in 1787 and died the following year from pneumonia.

ERNEST HENRY STARLING (1866–1927)

Starling’s law of the heart, description of capillary forces, discovery of the first hormone secretin

Ernest Starling was born in London in 1866, the son of a lawyer and one of seven children. At the age of 16, he entered Guy’s Hospital as a medical student, qualified in 1888 and proceeded to MD in 1890. The following year he married the widow of a physiologist who had died young and for many years she acted as Starling’s secretary. Starling’s sister married the physiologist William Bayliss, who worked as Starling’s collaborator throughout their lives.

In 1899 Starling was appointed Professor of Physiology at University College, London, where Bayliss acted as his assistant. In the same year, Starling was elected an FRS. Starling was a master of experimental

physiology, developing numerous standard methods of experimental physiological techniques, which included the heart–lung preparation.

Starling's early work was concerned with his capillary theory of fluid exchange in the tissues – the balance between the fluid pressure in the capillaries and the osmotic pressure in the surrounding tissue fluid. With Bayliss, he devised the heart–lung preparation and developed his law of the heart – that the output of the heart depends on the stretch of the ventricular muscles in diastole. With Bayliss, he described the first 'hormone' (a term that Starling introduced, derived from the Greek meaning to excite or stimulate). This was secretin, derived from the duodenum and upper jejunum and stimulating pancreatic juice secretion.

During the First World War, Starling served in Salonika as a colonel with the Royal Army Medical Corps. He retired from UCH in 1923 but continued to work as research professor at the Royal Society on the physiology of the kidney until his death, aged 61, in 1927. Truly a remarkable and original investigator.

ARMAND TROUSSEAU (1801–1867)

Trousseau's tourniquet sign for tetany, Trousseau's sign: thrombophlebitis migrans due to visceral carcinoma

Armand Trousseau was born in Tours, France, in 1801 and graduated in medicine in Paris in 1825. He was appointed physician at the Hôpital St Antoine in 1839 and at the Hôtel Dieu in 1850. He was an outstanding physician and a popular teacher; his textbooks on therapeutics and on clinical medicine were best sellers and both were translated into English. In his teaching he popularized the use of eponyms such as Hodgkin's disease.

He demonstrated that in patients with tetany, occlusion of the pulse with a sphygmomanometer for a few minutes will induce carpopedal spasm. He also

described superficial thrombophlebitis in the veins of the limbs in advanced malignant disease. This latter condition he also diagnosed in his left arm when he developed stomach cancer, from which he died 6 months later.

RICHARD VON VOLKMANN (1830–1889)

Volkman's ischaemic contracture

The whole of Richard von Volkmann's professional life was spent at Halle, in Saxony, where his father held the Chair of Anatomy and Physiology. Richard studied at several universities, as was the custom in Germany in those days, and qualified MD at Berlin at the age of 24. Two years later he was appointed deputy professor of surgery at Halle and in 1867 was promoted to a full professorship.

When Volkmann took over as professor, 'hospital gangrene' was so common in the surgical wards that it was said that no one dared touch a knife in the surgical clinic. Volkmann immediately established a rigorous antiseptic regime based on the writings of Lister, which had just been published in *The Lancet* in 1867. Not only was Lister's carbolic spray used, but the surgical wound was also irrigated with a 1 in 20 carbolic acid solution poured from a watering can.

Volkman was an elegant, bold and original operator. He made several contributions to operative surgery, including the use of a special curette, 'Volkman's spoon', to clear out the underlying tuberculous lymph nodes in so-called 'collar-stud' abscesses of the neck.

Volkman first described ischaemic contracture in 1872. Until then, the condition was regarded as being due to nerve injury. Volkman showed that it followed the death of muscles, with their replacement by fibrous tissue, as a result of arterial damage. The vascular injury could result especially from tight splinting. Although common in the forearm muscles, Volkman showed that it could also occur in the lower limb. Volkman served as a surgeon during the Franco-Prussian war of 1870 and died in 1889 at the age of 59.

